

REMARKS

In the Office Action of September 29, 2005, claims 1-6 and 10-23 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 5,908,347 ("Nakajima et al.") in view of U.S. Patent No. 6,346,038 B1 ("Kajiware et al."). In response, Applicant respectfully asserts that the Examiner has failed to establish a *prima facie* case of obviousness for the independent claims 1 and 10, as explained below. Specifically, there is no suggestion or motivation to combine the teachings of Nakajima et al. and Kajiware et al. to derive the claimed invention. Thus, Applicant respectfully asserts that the independent claims 1 and 10, as well as the dependent claims 2-6 and 11-23, are not obvious in view of the cited references of Nakajima et al. and Kajiware et al., and requests that these pending claims be allowed.

A. Patentability of Independent Claims 1 and 10

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The Office Action has rejected the independent claims 1 and 10 under 35 U.S.C. §103(a) as allegedly being obvious over Nakajima et al. in view of Kajiware et al. However, the Examiner has failed to establish a *prima facie* case of obviousness for these independent claims 1 and 10. Thus, the independent claims 1 and 10 cannot be rendered obvious in view of the cited references of Nakajima et al. and Kajiware et al.

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To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

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The cited reference of Nakajima et al. discloses a polishing system that includes four polishing units 50 and three transferring units 60 (see Figs. 1 and 3). Each polishing unit 50 includes a polishing plate 52 on which four carrying plates 12 can be set (column 5, lines 32-36). Four wafers 11, whose diameter is 8 inches, or five wafers 11, whose diameter is 6 inches, are mounted on each carrying plate 12 (column 4, lines 8-11). The transferring units 60 are respectively provided between the adjacent polishing units 50 (column 6, lines 13-14). Each transferring unit 60 transfers the carrying plate 12, which is located at a discharging position of the polishing plate 52 of the polishing unit 50 located on an upstream side, to a feeding position of the polishing plate 52 of the polishing unit 50 located on a downstream side (column 6, lines 14-19).

The Office Action states on page 4 that the cited reference of Nakajima et al. "does not explicitly disclose that the object carriers use load-and-unload cups to transport objects." Since this statement does not make sense with respect to the relevant claims, Applicant assumes the Examiner means that Nakajima et al. does not explicitly disclose that the object relay devices, i.e., the transferring units 60, use load-and-unload cups to transport objects. However, the Office Action states that Kajiware et al. "teaches the use of load-and-unload cups to transport objects between storage and a polishing device, and back to storage." The Office Action then asserts that "[i]t would have been obvious to one of ordinary skill to have provided '347 [Nakajima et al.] with the load-and-unload cups taught by '038 [Kajiware et al.], column 2, lines 40-48, to provide a wafer loading/unloading device which is capable of performing positioning and mounting easily and in a stable manner when attaching the wafer to the polishing head and which can receive the polished wafer in a stable manner and pass it to the next step." Applicant respectfully disagrees with this analysis.

As mentioned above, the transferring units 60 of Nakajima et al. are used to transport carrying plates 12. Each carrying plate 12 can carry four or five wafers 11, which are mounted thereon. However, the cited reference of Kajiware et al. discloses a wafer loading/unloading device that is used to transport individual wafers. The wafer

loading/unloading device of Kajiwara et al. includes a loading device 1 (see Fig. 1) and an unloading device 101 (see Fig. 6). The loading device 1 includes a loading portion 2, which is used to receive a wafer from a wafer conveying mechanism (column 10, lines 19-29) and to attach the wafer onto a polishing head (column 10, line 62, to column 11, line 5). The unloading device 101 includes an unloading portion 102, which is used to receive a wafer from a polishing head (column 12, lines 5-17) and to pass the wafer to a robot arm 140 (column 12, lines 18-24).

Since the transferring units 60 of Nakajima et al. are used to transport carrying plates and the wafer loading/unloading device of Kajiwara et al. is used to transport individual wafers, it would not make sense to combine the teachings of Nakajima et al. and Kajiwara et al. in the manner suggested by the Examiner. In particular, the resulting transferring units with the load-and-unload cups of Kajiwara et al. could not transport the carrying plates 12 between the polishing units 50. If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Thus, there is no suggestion or motivation to modify the polishing system of Nakajima et al. using the teachings of Kajiwara et al. as proposed by the Examiner. Consequently, the Examiner has failed to establish a *prima facie* case of obviousness for the independent claims 1 and 10. Therefore, Applicant respectfully requests that the independent claims 1 and 10 be allowed.

B. Patentability of Dependent Claims 2-6 and 11-23

Each of the dependent claims 2-6 and 11-23 depends on one of the independent claims 1 and 10. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicant submits that these dependent claims are allowable for at least the same reasons as their respective base claims.

Applicant respectfully requests reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

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Respectfully submitted,

In Kwon Jeong

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